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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,065	11/28/2001	Frank M. Zizzamia	098056/00120	1153

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EXAMINER	
RINES, ROBERT D	
ART UNIT	**PAPER NUMBER**
3626	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/996,065	ZIZZAMIA ET AL.	
	Examiner	Art Unit	
	Robert D. Rines	3626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/6/02, 7/15/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Notice to Applicant

[1] This communication is in response to the patent application filed 28 November 2001. The IDS statements filed 6 March 2002 and 15 July 2002 have been entered and considered. Claims 1-20 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

[2] Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Summerell et al. (United States Patent #5,937,387).

As per claim 1, Summerell teaches a system for calculating the contribution of each of a plurality of variables in a statistical model including a scoring formula for generating a score comprising: a database for storing values associated with at least some of the plurality of variables (Summerell et al.; col. 3, lines 19-41 and col. 8, lines 8-29), means for calculating a slope for any

of the plurality of variables (Summerell et al.; col. 16, lines 13-35), means for calculating a deviance value for any of the plurality of variables (Summerell et al.; col. 9, lines 62-67, col. 10, lines 1-16, and col. 16, lines 16-35) and means for calculating the contribution of any of the plurality of variables based on the calculated slope and deviance values (Summerell et al.; col. 16, lines 16-35 and Table 2).

As per claim 2, Summerell et al. teaches a system wherein the means for calculating the slope comprises a software module that takes the first derivative of the scoring formula with respect to the variable being analyzed (Summerell et al.; col. 8, lines 18-29 and col. 15, lines 35-55 and col. 16, lines 4-35).

As per claim 5, Summerell et al. teaches a system further comprising means for ranking the individual variables based on the calculated contribution (Summerell et al.; Table 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

[3] Claims 6-14 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summerell et al.

As per claim 6, Summerell et al. teaches a system wherein the means for calculating a deviance value includes a software module that receives inputs for a mean value and a standard deviation value and the deviance value is calculated (Summerell et al.; col. 8, lines 9-29 and col. 10, lines 1-39).

While Summerell et al. teaches a system/method enabled by software applications (Summerell et al.; col. 8, lines 19-24) and Summerell further teaches applying a combination of mean values and deviation values for the purpose of determining relative contributions of a number of risk factors influencing the health risk associated with an individual (Summerell et al.; col. 10, lines 1-40 and col. 16, lines 4-35), Summerell et al. fails to explicitly state using the formula: 6 Deviance of x i = (x i - i) i where .mu..sub.1 is the mean for x.sub.1 and .sigma..sub.1 is the standard deviation for predictive variable x.sub.1.

However, because Summerell et al. applies the same variables and factors to calculations determining the overall risk associated with an individual as those set forth by the Applicant in the present application, Examiner interprets the above noted teachings of Summerell et al. to be functionally analogous to Applicant's use of a mean value and deviation values (and slope determined as a function of a variable) in determining the relative contribution of a number of risk factors to the overall risk associated with an individual. Accordingly, it would have been obvious to one of ordinary skill in the art to have applied the mean value and deviation values to an equation determining the relative health risk associated with an individual. The motivation to perform the calculations would have been to factor average survival probability data, including

recalibrating relative risks using the mean of a population and associated deviations, into determining a user's physiological age as a measure of the overall wellness of an individual (Summerell et al.; col. 10, lines 1-40 and col. 11, lines 13-39). Further motivation would have been to provide a system and method that supplies new statistics for calculating health and life insurance premiums (Summerell et al.; col. 5, lines 3-5)

As per claim 7, Summerell et al. teaches a system wherein the contribution is calculated for any of the plurality of variables by multiplying the slope and deviance values (Summerell et al.; col. 16, lines 13-35 *see analysis claim 6).

As per claim 8, Summerell et al. teaches a system that employs a statistical model comprised of a scoring formula having a plurality of predictive variables for generating a score that is representative of a risk associated with an insurance policyholder (Summerell et al.; col. 5, lines 2-18), a method of evaluating the contribution of each of the plurality of predictive variables to the score generated by the model comprising the steps of populating a database associated with the system with a mean value and standard deviation value for each of the plurality of predictive variables (Summerell et al.; col. 3, lines 19-41, col. 8, lines 8-19, col. 10, lines 1-16, col. 16, lines 16-35), calculating a slope value for each of the plurality of predictive variables (Summerell et al.; col. 16, lines 13-35), calculating a deviance value based on the mean value and the standard deviation value (Summerell et al.; col. 10, lines 1-39) for each of the plurality of predictive variables (Summerell et al.; Table 2), and multiplying the deviance value and slope value for each of the plurality of predictive variables to determine the contribution of each of the plurality

of predictive variables to the score (Summerell et al.; col. 16, lines 13-35 *see analysis claim 6).

As per claim 9, Summerell et al. teaches a method further comprising the step of defining at least one assumption for the mean value associated with at least one of the plurality of predictive variables (Summerell et al.; col. 16, lines 16-18).

As per claim 10, Summerell et al. teaches a method wherein the step of calculating the slope further comprises the step of calculating the first derivative of the scoring formula with respect to the predictive variable of the plurality of predictive variables that is being analyzed (Summerell et al.; col. 16, lines 4-35).

As per claim 11, Summerell et al. teaches a method wherein the deviance value is calculated as follows: 7 Deviance of x i = (x i - i) i where .mu..sub.1 is the mean for x.sub.1 and .sigma..sub.1 is the standard deviation for predicitve variable x.sub.i (Summerell et al.; col. 10, lines 1-39 and col. 16, lines 13-35 *see analysis claim 6).

As per claim 12, Summerell et al. teaches a method further comprising the step of ranking each of the plurality of predictive variables based on the contribution of a predictive variable to the score wherein a predictive variable having a higher calculated contribution value is assumed to have had a greater effect on the score (Summerell et al.; col. 14, lines 20-42).

As per claim 13, Summerell et al. teaches a method of evaluating the contribution of each of the

plurality of variables in a statistical model comprised of a scoring formula having at least one value associated with each of the plurality of variables comprising the steps of obtaining a mean value and a standard deviation value for each of the plurality of variables (Summerell et al.; col. 9, lines 62-67 and col. 10, lines 1-40), calculating a slope value for each of the plurality of variables (Summerell et al.; col. 16, lines 4-35), calculating a deviance value based on the mean value and the standard deviation value for each of the plurality of variables (Summerell et al.; col. 9, lines 62-67 and col. 10, lines 1-40), and multiplying the deviance value and slope value for each of the plurality of variables to quantify the contribution of each of the plurality of variables to the score (Summerell et al.; col. 16, lines 13-35 *see analysis claim 6).

As per claim 14, Summerell et al. teaches a method further comprising the step of populating a storage means with the mean value and standard deviation values for each of the plurality of variables (Summerell et al.; col. 3, lines 19-41, col. 8, lines 8-19, col. 10, lines 1-16, col. 16, lines 16-35).

As per claim 17, Summerell et al. teaches, in system that employs a statistical model comprised of a scoring formula having a plurality of predictive variables for generating a score that is representative of a risk associated with an insurance policyholder and for pricing a particular coverage based on the score, a method of quantifying the contribution of each of the plurality of predictive variables to the score generated by the model comprising the steps of populating a database associated with the system with a mean value and a standard deviation value for each of the plurality of predictive variables (Summerell et al.; col. 3, lines 19-41, col. 8, lines 8-19, col.

10, lines 1-16, col. 16, lines 16-35 and Table 2), calculating a slope value for each of the plurality of predictive variables (Summerell et al.; col. 16, lines 4-35), calculating a deviance value based on the mean value and the standard deviation value for each of the plurality of predictive variables (Summerell et al.; col. 9, lines 62-67 and col. 10, lines 1-40 and Table 2), and multiplying the deviance value and slope value for each of the plurality of predictive variables to quantify the contribution of each of the plurality of predictive variables to the score (Summerell et al.; col. 16, lines 13-35 *see analysis claim 6).

As per claim 18, Summerell et al. teaches a method further comprising the step of ranking each of the plurality of variables based on the quantified contribution as calculated for each of the plurality of predictive variables (Summerell et al.; col. 14, lines 21-42 and Table 2).

As per claim 19, Summerell et al. teaches a method wherein the step of calculating the slope further comprises the step of calculating the first derivative of the scoring formula with respect to a predictive variable of the plurality of predictive variables that is being analyzed (Summerell et al.; col. 8, lines 18-29 and col. 15, lines 35-55 and col. 16, lines 4-35).

As per claim 20, Summerell et al. teaches a method wherein the deviance value is calculated as follows: 8 Deviance of x i = (x i - i) i where .mu..sub.i is the mean for x.sub.1 and .sigma..sub.i is the standard deviation for predictive variable x.sub.1 (Summerell et al.; col. 10, lines 1-39 and col. 16, lines 13-35 *see analysis claim 6).

Regarding claim 7-14 and 17-20, the obviousness and motivation as discussed with regard to claim 6 above are applicable to claims 7-14 and 17-20 and are herein incorporated by reference.

[4] Claims 3-4 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Summerell et al. in view of Hele et al. (United States Patent Application Publication #2002/0116231).

Regarding claims 3-4 and 15-16, while Summerell et al. determines the overall health risk associated an individual as a function of an individual's calculated or estimated physiological age and further indicates that the performed calculations would be of assistance to an insuring entity when determining premiums for an insurance policy (Summerell et al.; col. 5, lines 3-13), Summerell et al. fails to specifically relate the health assessment score to a specific premium.

However, as is evidenced by Hele et al., the translation or a rating score or risk assessment score into a premium amount of class is well-known in the art (Hele et al.; paragraphs [0077] [0097]).

Accordingly, as per claim 3, Hele et al. teaches a system wherein the plurality of variables describe characteristics of at least one of an existing policyholder and potential policyholder and the scoring formula is used to generate a score reflective of the expected loss/premium ratio for an insurance policy (Hele et al.; paragraphs [0063] [0077] [0097]).

As per claim 4, Hele et al. teaches a system wherein the premium for the insurance policy is based on the score (Hele et al.; paragraphs [0077] [0097]).

As per claim 15, Hele et al. teaches a method wherein the statistical model is used to assess the profitability of an insurance policy and each of the plurality of variables is associated with at least one of the policyholder and item to be insured (Hele et al.; paragraphs [0077] [0097]).

As per claim 16, Hele et al. teaches a method wherein a score generated by the model determines the price for the insurance policy and the contribution is used to identify which variables had the greatest effect on the price (Hele et al.; paragraphs [0028] [0063] [0064] [0077] [0097]).

Regarding claims 3-4 and 15-16, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teachings of Summerell et al. with those of Hele et al. Such combination would have provided a system/method that supplies new statistics for calculating health and life insurance premiums (Summerell et al.; col. 5, lines 3-15). Further, such a system/method would have applied a user's or policy holder's calculated age (Summerell et al.; col. 11, lines 24-29) to a quantitative rating figure that is directly applied to premium determinations regarding a policy holder or applicant for insurance (Hele et al.; paragraph [0063]). The motivation to combine the teachings would have been to facilitate the evaluation of an applicant's risk against underwriting criteria when creating insurance policies (Hele et al.; paragraph [0041]).

Conclusion

[5] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schotz, METHOD AND APPARATUS FOR FACILITATING OPERATION OF AN INSURANCE PLAN, United States Patent #4,837,693

Powers, DYNAMIC POLICY ILLUSTRATION SYSTEM, United States Patent #5,956,691

Osborn et al., SYSTEM AND METHOD FOR AUTOMATED RISK-BASED PRICING OF A VEHICLE WARRANTY INSURANCE POLICY, United States Patent #6,182,048

Liebeskind et al., INSURANCE RISK, PRICE, AND ENROLLMENT OPTIMIZER SYSTEM AND METHOD United States Patent Application Publication #2002/0188480.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert D. Rines whose telephone number is 571-272-5585. The examiner can normally be reached on 8:30am - 5:00pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 571-272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RDR 01/25/06

C. LUKE GILLIGAN
PATENT EXAMINER